

§ 434.301

Unconditioned space: space within a building that is not a conditioned space. (See “conditioned space”)

Unitary cooling equipment: one or more factory-made assemblies that normally include an evaporator or cooling coil, a compressor, and a condenser combination (and may also include a heating function).

Unitary heat pump: one or more factory-made assemblies that normally include an indoor conditioning coil, compressor(s), and outdoor coil or refrigerant-to-water heater exchanger, including means to provide both heating and cooling functions.

Variable-air-volume (VAV) HVAC system: HVAC systems that control the dry-bulb temperature within a space by varying the volume of heated or cooled supply air to the space.

Vent damper: a device intended for installation in the venting system, in the outlet of or downstream of the appliance draft hood, of an individual automatically operating gas-fired appliance, which is designed to automatically open the venting system when the appliance is in operation and to automatically close off the venting system when the appliance is in a standby or shutdown condition.

Ventilation: the process of supplying or removing air by natural or mechanical means to or from any space. Such air may or may not have been conditioned.

Ventilation air: that portion of supply air which comes from the outside, plus any recirculated air, to maintain the desired quality of air within a designated space. (See also “outdoor air”)

Visible light transmittance: the fraction of solar radiation in the visible light spectrum that passes through the fenestration (window, clerestory, or skylight).

Walls: those portions of the building envelope enclosing conditioned space, including all opaque surfaces, fenestration, and doors, which are vertical or tilted at an angle of 60° from horizontal or greater. (See also “roof”)

Wall heat capacity: the sum of the products of the mass of each individual material in the wall per unit area of wall surface times its individual specific heat, expressed in Btu/(ft²·°F). (See “thermal mass”)

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Window to wall ratio (WWR): the ratio of the wall fenestration area to the gross exterior wall area.

Zone: a space or group of spaces within a building with any combination of heating, cooling, or lighting requirements sufficiently similar so that desired conditions can be maintained throughout by a single controlling device.

Subpart C—Design Conditions

§ 434.301 Design criteria.

301.1 The following design parameters shall be used for calculations required under subpart D of this part.

301.1.1 *Exterior Design Conditions.* Exterior Design Conditions shall be expressed in accordance with Table 301.1.

TABLE 301.1—EXTERIOR DESIGN CONDITIONS

Winter Design Dry-Bulb (99%).	.....	Degrees F.
Summer Design Dry-Bulb (2.5%).	.....	Degrees F.
Mean Coincident Wet-Bulb (2.5%).	.....	Degrees F.
Degree-Days, Heating (Base 65).	.....	HDD Base 65 °F.
Degree-Days, Cooling (Base 65).	.....	CDD Base 65 °F.
Annual Operating Hours, 8 a.m. to 4 p.m. when 55°F ≤ T ≤ 69 °F.	.....	Hours.

[The exterior design conditions shall be added to Table 301.1 from the city-specific Shading Coefficient table from Appendix A of RS-1 (incorporated by reference, see § 434.701). Copies of specific tables contained in Appendix A of RS-1 (incorporated by reference, see § 434.701), can be obtained from the Energy Code for Federal Commercial Buildings, Docket No. EE-RM-79-112-C, EE-43, Office of Building Research and Standards, U.S. Department of Energy, Room 1J-018, 1000 Independence Avenue, SW., Washington, DC 20585, (202) 586-9127. Adjustments may be made to reflect local climates which differ from the tabulated temperatures or local weather experience as determined by the building official. Where local building site climatic data are not available, climate data from a nearby location included in RS-1, Appendix C, (incorporated by reference, see § 434.701) and RS-4 Chapter 24, Table 1, (incorporated by reference, see § 434.701) shall be used as determined by the building official.]

301.2 *Indoor Design Conditions.* Indoor design temperature and humidity conditions shall be in accordance with the comfort criteria in RS-2 (incorporated by reference, see § 434.701), except that humidification and dehumidification are not required.